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# **AIR FORCE ACADEMY FIRE DEPARTMENT**



## **STRATEGIC PLAN 2000**

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## DEPARTMENT OF THE AIR FORCE

10th CIVIL ENGINEER GROUP

USAF ACADEMY, COLORADO

MEMORANDUM FOR 510 CES/CEF

7 July 2000

FROM: 510 CES/CC

SUBJECT: Fire Department Strategic Plan

The Air Force Academy Fire Department Strategic Plan has been submitted to my office, and is approved as written.

A handwritten signature in black ink, appearing to read "Rich A.", is positioned above the typed name of the signatory.

RICHARD A. FRYER, Jr., Lt Col, USAF  
Commander  
510<sup>th</sup> Civil Engineer Squadron

Attachment:  
Strategic Plan

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## EXECUTIVE SUMMARY

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The Air Force Academy Fire Department is charged with protecting life and property within the boundaries of the United States Air Force Academy. Past planning by 10<sup>th</sup> Civil Engineer Group established many construction projects on the Academy including the creation of new facilities and renovations of existing facilities. The result is great improvements in the level of engineering features to provide a safer environment for the citizens of our community. These new developments in building design and construction, coupled with new technology and equipment will force our department to constantly evaluate our methods of delivering emergency services to our community.

A strategic plan developed by the Air Force Academy Fire Department provides a foundation to meet that challenge. The plan establishes priorities, identifies goals and develops fiscal options for emergency services through the next five years. It is a living document that will be constantly evaluated, re-examined, and updated as needed. The department is prepared and postured for these challenges and opportunities. This document is intended to be used as a planning tool to ensure that our department will provide current and future emergency services in a fiscally sound manner. The 2000-2005 Academy Fire Department Strategic Plan represents the efforts of many people in evaluating our department and its mission, anticipating the future in terms of community needs and resources required to meet those needs, and in formulating a plan to provide comprehensive cost-effective services to our customers - the citizens of the Academy.

It will serve to inform the members of our department of the preparation for the future, while at the same time serving as a foundation document for informing policymakers and for addressing the budget process.

Section one lists the goals and objectives that the Fire Department believes are necessary to meet the future service demands of the community. Performance measures are utilized to evaluate the effectiveness of the Department's efforts. The Department's goals are to:

1. Minimize death, injury and property losses due to fire.
2. Minimize death and suffering for people experiencing sudden illness, accidents, or injury.

3. Minimize death, injury and property losses due to hazardous material, severe weather conditions and natural or man-made disasters.
4. Provide sufficient emergency response services in a fiscally responsible manner.
5. Maximize employee satisfaction.
6. Accurately identify community expectations and evaluate community satisfaction.

In order to ensure that a contemporary strategy is used in the future, the Strategic Plan will be evaluated and revised on an annual basis.

## **COMMUNITY PROFILE**

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### ***POPULATION***

The Academy's current population is 13,441. The Academy's population is limited by the amount of people assigned to the installation and remains relatively constant.

### ***AGE***

The age structure of The Academy's population is another constant that is a by-product of the nature of our community. Our citizens are active duty military members, cadets, government employees, dependents, school age children and visitors. The only group that fluctuates in age are our visitors, each year we estimate that almost 1.5 millions people tour the Air Force Academy.

## **LAND AND REAL ESTATE CHARACTERISTICS**

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As of 1999, the Air Force Academy encompassed 18,455 square acres of land. Only 4,148 square acres of the Air Force Academy is considered to be developed (approximately 22.5%). The Academy Fire Department protects \$1.3 billion of real property. The majority of the real property is residential. Residential property is also associated with the largest fire losses on the Academy. The developed areas on the Air Force Academy is comprised of 16% residential land use, 14% commercial, 9% for athletics and field training, 8% aircraft operations and maintenance, 6% industrial, and 47% of the land used for academics, administrative, medical, and tourist areas. The associated fire loss over the past three years indicates that \$20K of the total loss was due to residential structure fires.

### ***Economic Characteristics***

The Academy's rate of job growth is projected to be constant over the next decade, however, many organizations on our installation are being considered for contract operations. Contract operators will alter the economic make-up of our workforce.

### ***Community Risks***

Although our Department is a full service emergency response department, a recent risk analysis has shown the predominate risk in the Academy to be the low and moderate categories. Emergency medical calls, which fall in the low risk category, are the predominant workload for our department. In the fire categories, the predominate risk is the one- and two-family structures, which are considered a moderate risk. The majority of the structure fires that occur on the Academy are contained to the room of origin. The number and type of apparatus is determined by fire flow and travel times to our facilities. Fire flow requirements are established in accordance with MIL-Handbook 1008C while travel times are derived from DoD Instruction 6055.6.

## INTRODUCTION/BACKGROUND

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### ***Why We Are Here***

Each year throughout the United States, fires kill thousands, injure hundreds of thousands and destroy billions of dollars in property. Heart attacks, car accidents, hazardous material spills, acts of terrorism and catastrophes such as flooding and tornadoes cause other deaths, injury and destruction.

The mission of the U.S. Air Force Academy Fire Department is to provide programs designed to protect the lives and property of the inhabitants and visitors of the USAF Academy from the adverse effects of fires, medical emergencies, and exposure to hazardous conditions created by either man or nature.

### ***Mission & Principle of the Academy Fire Department***

To support our Mission, our department has prioritized four key organizational principles. They are:

- *Support a safe, healthy and diverse workplace,*
- *Establish and maintain the highest quality fire suppression program,*
- *Establish a strong community relations program, particularly in the area of fire prevention and public education*
- *Promote lifelong learning with an emphasis for high professional standards and higher education.*

## THE ACADEMY FIRE DEPARTMENT

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### ***The Past***

Fire protection was provided to the Air Force Academy as part of the Air Force Academy Construction Agency on June 4, 1954. The United States Air Force took over fire protection duties in June 1958, operating out of Fire Station 1 on Pine Drive. Two additional fire stations were added, Station 2 on Academy Drive and Station 3 on the flightline, to provide full coverage to the installation.

## ***The Present***

The Academy Fire Department continues to meet the constant demand for our services. The Department expects to respond to over 1,200 emergency incidents this year, which is typical for cities in size similar to that of the Academy. In addition to combating structure fires, firefighters provide emergency medical technicians to compliment the Academy's emergency medical system, rescue people trapped as a result of accidents and respond to hazardous material releases. Our department also provides non-emergency services such as fire prevention inspections, pre-fire planning, disaster preparation, arson investigation and community education programs.

The Fire Department operates three engine companies, one ladder company, a hazardous materials response team, a technical rescue team, a wildland fire fighting team and a water/dive team. Fire stations are staffed 24 hours per day, seven days each week with an optimum of 18 firefighters on duty. As a result of military deployments during approximately 8 months of the year, minimum staffing during any period is 14 fire fighters on duty (plus the assistant chief). The department employs 41 civilian and 28 military personnel. The Department's annual Operating and Maintenance (O&M) budget is \$200,000.

## **SECTION 1: WHERE THE DEPARTMENT WANTS TO BE — GOALS AND OBJECTIVES**

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This Strategic Plan contains the goals and objectives our department feels is necessary to maintain the high level of service expected by our community and base leadership.

### **Goal One — Minimize death, injury and property losses due to fire.**

The primary Academy Fire Department priority is life safety and our department and its members make every effort to prevent the loss of life and injury within the community. The department is organized, trained and equipped to provide aggressive, offensive firefighting tactics.

#### **Objective 1: Limit fire-related fatalities and injuries within our community.**



Over the past three years the Academy has had an average of 0 civilian injuries per year and 0 deaths per year. This information is indicative of an extremely successful program.<sup>1</sup>

Performance Measures:

1. *Assure that the established Department Response Objectives are met.*
  - The Fire Department will strive to arrive and intercede prior to the flashover stage of a structure fire. Fires that reach flashover are responsible for a disproportionate number of fire deaths and large fire loss. This measure is crucial to maintaining a reasonable level of risk on the Academy. The time frame requires that intervention take place eight to ten minutes after the Fire Department receives initial notification.<sup>2</sup> The Fire Department will strive to meet **response times** as outlined in DoDI 6055.6: **5-9 minutes** for the first company and **10-18 minutes** for the remainder of the assigned apparatus, based on the type of hazard.

In 1998 the Department demonstrated an **8-minute** total response time on 85% of all emergency responses, which correlates to an average response time of 6:07, and the **12-minute** total response time on 81% of all emergency responses, which correlates to an average response time of **9:49**.
2. *Establish a minimum standard of personnel readiness*
  - All companies will be required to perform randomly assigned company readiness evolutions annually. The evolutions will be based upon standards established by the National Fire Protection Association (NFPA) 1410, Standard on Training for Initial Fire Attack. All Companies will be required to complete the evolutions within the timeframes established by our department.

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<sup>1</sup> Information compiled from AFAFD Annual Response Reports, 1995-1999

<sup>2</sup> *Commission on Fire Accreditation International Fire and Emergency Service Manual*, Section 3, pp. 43, Fifth Edition.

- All firefighters will complete a minimum of 24 hours of fire suppression training per year. This training will include an average of two scheduled hours of suppression training per month. (NFPA 1500)
- All firefighters will be capable of performing the standards for Fire Fighter II; Fire Officer I is required for all Lieutenants, Fire Officer II will be required for all station captains, Fire Officer III for all Assistant Chiefs and Fire Officer IV for the Deputy Chief and the Fire Chief.

**Objective 2: Limit fireground injuries to firefighters.**

Because firefighter injuries are closely related to improper attitude, equipment, practices and conditioning; the maintenance and continuation of an effective Risk Management Plan becomes essential.

Performance Measure:

1. *Limit fireground injuries to less than 50% the nationwide average.*<sup>3</sup>

Over the past four years the department has had no fireground injuries. The national average for 1997 was 15.7 fireground injuries, for similar population served.

- Ensure all firefighters meet and maintain the established physical performance and fitness standards. This will be accomplished through annual performance and fitness assessments, mandatory compliance with the standards and inclusion of performance and fitness testing as part of the annual Employee Performance Appraisals.
- Perform an annual review of the Risk Management Plan, for the purpose of identifying and implementing risk control measures.
- Accomplish and maintain total compliance with our NFPA 1500 Action Plan.

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<sup>3</sup> NFPA Journal, 1998, November & December *U.S. Firefighter Injuries*, pp. 52.

**Objective 3: Limit the number of fires occurring within the community.**

By limiting the number of fires, we instantly reduce the risk of injury, death and economic impact to the citizens of the Academy.

Performance:

1. *Limit fire starts to less than 70% of the national average.*

Over the past five years, the Academy has experienced an average of less than 4 structure fires per year, which equates to 3.25 fires per 1,000 population per year.<sup>4</sup> The national average is 6.7 fires per 1,000 population.

- Establish increased citizen awareness through public education programs such as our annual Open House, Fire Prevention Week Activities, our puppet show performances throughout the year and our visits to the schools, child development centers and family day care homes.
- Establish timely enforcement of the most current fire codes and standards and Military-Handbook (1008 series). At this time, both the fire department and Engineering Flight are using Mil-Handbook 1008C.
- Maintain staffing levels within the Fire Prevention Element to provide annual inspections for required facilities and to adequately inspect all new construction.

**Objective 4: Limit fire losses in the community.**

Direct fire loss is utilized to measure the overall effectiveness of the Public Education, Fire Prevention and Fire Suppression programs.

Performance Measure:

1. *Reduce direct community fire loss to less than 50% of the national average.*

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<sup>4</sup> Information obtained from AFAFD Annual Response Reports, 1995-1999.

Over the past five years the Academy has experienced an average annual direct structural fire loss of \$2.63, which equates less than one dollar per capita.<sup>5</sup> The national average is \$31.85 per capita.<sup>6</sup>

- Timely and concurrent adoption of the most current edition of the Mil-Handbook 1008 series.
- To maintain offensive firefighting tactics, the Fire Department will strive to arrive and intercede prior to flashover stage of a structure fire. The Fire Department will strive to meet a total response time of 5-9-minutes for the first company and 10-18-minutes for the remainder of the responding apparatus. This goal will be documented for all emergency responses.
- Develop and maintain fire suppression training that meets nationally accepted standards for individual and company performance and annually evaluates performance of those standards.

## **Goal Two — Minimize death and suffering for people experiencing sudden illness, accidents, or injury.**

When people suffer from a sudden severe illness, have an accident or are injured in any way, the emergency medical services (EMS) system attempts to intercede before further injury or death results. A timely and appropriate EMS response reduces deaths, pain and suffering, hospital stays and medical costs.

### **Objective 1: Provide timely emergency medical and rescue services.**

From an emergency medical perspective, a six-minute time frame is used as a means of service level measurement, as brain damage is likely to occur in cardiac arrest patients after six minutes with diminished oxygen flow to the brain. In addition, external defibrillation measures

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<sup>5</sup> Information compiled from AFAFD Annual Response Reports, 1995-1999.

<sup>6</sup> Data received from NFPA, 8/17/99, Marty Aaron (617) 984-7463.

provide the greatest chance of survival if utilized within ten minutes of the onset of cardiac arrest.<sup>7</sup>

Performance Measures:

1. *Provide Emergency medical service within **5-minute** (total response time) in 90% of all calls requiring emergency medical assistance.*
  - The Fire Department will provide all citizens with initial life-saving care utilizing EMD. The Fire Department will strive to arrive and provide emergency medical service within 5-minutes total response time for 90% of all emergency medical calls. In 1998 the Department demonstrated a 5-minute total response time on 85% of all emergency responses. (See Attachment B)

**Objective 2: Advance firefighter medical education to encompass a broad scope of capabilities.**

Provide an increased level of knowledge, skills and abilities to all firefighter/EMTs to enable our members to deliver a satisfactory level of care on scene or en-route to the hospital that was previously only available from the ambulance crews.

Performance Measure:

1. *Incorporate items into our medical training/education program. Deliver this training to all Department firefighter/EMT's*

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<sup>7</sup> *Commission on Fire Accreditation International The Fire and Emergency Service Manual*, 5<sup>th</sup> edition, Section 3, pp. 39-46.

**Goal Three — Minimize death, injury and property losses due to hazardous material, severe weather conditions and natural or man-made disasters.**

By definition, a disaster is a large-scale event that exceeds the type and amount of resources typically available to cope with an emergency. Public awareness, planning and preparation are key factors in minimizing the destructive effects of a disaster.

**Objective 1: Maintain a current disaster plan for the Academy and practice using the plan.**

Because disasters are not routine and come in different shapes and sizes, an effective all-risk plan of action must be established and practiced. The plan should incorporate mitigation, public awareness, community involvement, emergency action procedures, resources acquisition and recovery steps.

Performance Measure:

1. *Provide four disaster exercises for the Academy each year.*

A major part of preparedness is accomplished through disaster training. Training exercises based on different types of disasters helps improve emergency response procedures, creates community involvement, allow responders to enhance their skills, and point out flaws in the Emergency Operations Plan. The Academy's Exercise Evaluation Team members will present two tabletop exercises and four full-scale exercises annually.

**Objective 2: Provide an adequate early warning notification system to all portions of the community.**

Early warning and notification of a disaster to all portions of the community is a primary component of disaster preparedness. To assure system reliability and proper siren distribution, testing and maintenance is performed regularly and periodic upgrades may be required.

Performance Measure:

1. *All voice/siren speakers necessary to meet established audible requirements will be maintained and tested on an monthly basis.*

The 10<sup>th</sup> Communications Squadron will fund all maintenance and upgrade costs to operate our existing system.

**Goal Four — Provide a fully staffed engine company to all areas of the Academy**

In regards to the delivery of emergency services, the Commission on Fire Accreditation has determined that three key elements affect life safety and the economic impact of a community. They include distribution and concentration of responding personnel and equipment, and proper staffing. Distribution concerns the station and resource locations needed to assure rapid response deployment to minimize and terminate emergencies. Concentration is the spacing of multiple resources arranged so that an initial and effective response force can arrive on-scene within sufficient time frames to stop the escalation of an emergency.<sup>8</sup> Staffing levels are the minimum numbers of personnel assigned to each company to initiate the critical tasks that are outlined in the Academy Fire Department Standard of Response Coverage document. The goal of the Academy Fire Department is to address all three key elements as apart of our response objectives to all areas of the Academy.

**Objective 1: All fire stations will meet the distribution and concentration requirements of our department Standard of Response Coverage document.**

Performance Measures:

1. *Assure that all fire stations are located to allow a maximum total response time of the first due company of no longer than 5-9 minutes 90% of the time and 10-18 minutes 90% of the time for the next responding companies.*

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<sup>8</sup> CFAI Fire and Emergency Services Manual

**Objective 2: All companies will have the minimum number of personnel assigned to initiate the critical tasks that are outlined in the Academy Fire Department Standard of Response Coverage document.**

Performance Measures:

1. *All Engine Companies will be staffed with a minimum of four personnel. This will include a company officer, driver/operator and two firefighters. Any of these personnel may be EMT qualified, however the responsibilities to carry out the critical tasks for fire suppression engine companies will remain constant.*
2. *The Truck Company will be staffed with a minimum of four personnel. This will include a company officer, driver/operator and two firefighters. Any of these personnel may be EMT qualified, however the responsibilities to carry out the critical tasks for fire suppression truck companies will remain constant.*

**Goal Five — Provide sufficient emergency response services in a fiscally responsible manner.**

The Academy Fire Department believes in the prudent disbursement of public funds. We will strive to provide the Academy with sufficient resources in a cost-effective manner. The Department will continue to evaluate the efficiency and cost effectiveness of alternative service delivery methods.

**Objective 1: Maintain cost effective services in terms of population and value of property protected.**

The Department will continue to evaluate the community expectations and the emergency service provided as compared to the associated cost of that service.

**Performance Measures:**

1. *Keep Fire Department costs to under \$95 per capita, at final build out.*



The Fire Department has kept its average costs per capita relatively low at \$83.37 over the past five years.<sup>9</sup> A survey of surrounding cities indicates an average cost of \$95.23 per capita. The Department's recommendation allows for service increases required by anticipated growth while remaining below the average cost per capita of surrounding cities.

2. *Keep Fire Department costs under \$1.00 per \$1,000 value protected.*

This performance measure is relatively new to jurisdictions in Colorado. Although the \$1.00 per \$1,000 may need to be adjusted as more jurisdictions use this measurement, this measure provides the Department with an additional method to compare costs with other departments. Currently the Fire Department cost per \$1,000 value protected is \$0.49.

**Objective 2: Maintain sufficient resources to assure reliable and timely emergency response to all portions of the Academy.**

To assure a timely response the fire company assigned to the respective fire area must be available to respond. Unavailability of a fire company is typically due to assignment to another call, lack of a full crew due to a staffing shortage, training and equipment maintenance or repair. Unavailability of the first-due fire company results in assignment of the next available fire company and the corresponding response time increases.

Performance Measure:

1. *Maintain a reliability factor of greater than 80% for the first due company within their assigned fire area.*

The reliability factor identifies the percent of time a first due fire company is available to respond to an emergency incident within its assigned fire area.

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<sup>9</sup> AFAFD Annual Budgets, 1995-1999.

## **Goal Six — Maximize employee satisfaction.**

The most valuable resource of any organization is its employees. To maximize employee satisfaction the Department must provide and encourage avenues for employee input; training programs that reflect job requirements; establish a safe work environment by ensuring facilities, apparatus and equipment is of the highest quality and are appropriate for the tasks required; provide wellness, fitness and employee assistance programs that enhance the health of individual members and their families; and provide for employee recognition.

### **Objective 1: Provide and encourage avenues for employee input.**

#### Performance Measures:

1. *Ensure all members have the opportunity to be involved in the annual budget process for our department.*
2. *Maintain the Fire Chief's open door policy.*
3. *Encourage all members to use the Air Force Suggestion Program.*

### **Objective 2: Provide training programs reflective of job requirements.**

#### Performance Measures:

1. *Maintain all core documents for all positions on the Department.*
2. *Ensure training classes and curriculums meet the job requirements of each position.*
  - Monitor the effectiveness of the training curriculum through analysis of yearly performance evaluations (company performance evaluations, etc.), national standards, and employee surveys. The analysis for each of these will be done each October, prior to development of the annual training calendar.

3. *Maintain and enhance all existing educational programs utilized for career development.*

- This will include the following classes/courses, which are currently offered on a priority basis:
  - Education reimbursement as provided by the GI Bill and tuition assistance.
  - Courses provided by the National Fire Academy and the Air Force Institute of Technology (AFIT)
  - Conferences, workshops and seminars

**Objective 3: Establish a safe work environment by ensuring facilities, apparatus and equipment are of the highest standards.**

Performance Measures:

1. *Ensure that criteria for all department facilities, apparatus and equipment meet NFPA standards. This criterion will be evaluated semi-annually by our Fire Fighter Safety and Health Committee.*
2. *Support on-going research and development to ensure our facilities, apparatus and equipment are of the highest standards.*
3. *Continue to reduce the amount and severity of on-duty injuries through effective risk management and enhanced safety practices.*

**Objective 4: Provide wellness, fitness and employee assistance programs that enhance the health of individual members and their families.**

Performance Measures:

1. *Maintain an effective Employee Assistance Program for members of the department and their families.*
2. *Provide an effective fitness and wellness program for members of the Department. This program will include, but not be limited to, fitness and wellness education (nutrition, stress management, etc.) through the Health and Wellness Center; proper fitness equipment at each fire station; physical exams and fitness evaluation.*

**Objective 5: Maintain the employee recognition program.**

Performance Measures:

1. *Maintain forms and procedures for the recognition of exceptional employee performance.*
2. *Participate in the Academy's quarterly awards program by selecting our civilian and military winners and submitting them to the squadron for competition at the Wing and base level.*
  - This will include the Quarterly Awards program, Annual Awards Banquet and the Firefighter of the Year Dinner.

**Goal Seven — Accurately identify community expectations; evaluate community satisfaction.**

We realize we must accurately identify community expectations if we are to provide an adequate level of emergency service. We must also provide a means to measure the community's level of satisfaction with the emergency service provided.

**Objective 1: Develop a method to determine community expectations and satisfaction.**

Citizen surveys provide valuable information about public expectations and experiences. By being able to deliver quality services in a timely manner, we believe we will maintain a high satisfaction rating.

Performance Measures:

1. *Develop assorted surveys to identify community expectations and to evaluate community satisfaction. Maintain a 90% approval rating by citizens contacted through the surveys.*

Prepare a paper-based survey to determine citizen expectation and measure satisfaction regarding to services delivered by the Department.

- Conduct annual telephone surveys of a random population of Academy citizens to determine service expectations and measure satisfaction level.
- Analyze data gathered from all surveys and implement changes if applicable or needed.

## EVALUATION OF EXISTING INTERAGENCY AGREEMENTS

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The Strategic Plan lists four interagency agreements that have a significant impact on the mission of the Department.

- The **Mutual Aid Agreements** between Fire Departments or Fire Districts:
  - Colorado Springs
  - Donald-Wescott
  - Black Forest
  - Tri-Lakes
  - Palmer Lake
  - Woodmoor-Monument
- The **Ambulance Service Agreement** for I-25 incidents with American Medical Response and Tri-Lakes Fire District.
- The **Memorandum of Understanding** with El Paso County Search and Rescue.
- The **Memorandum of Understanding** with the El Paso County Sheriff's Office for HazMat Response

The purpose of each agreement is clearly defined within the terms of each agreement. As part of an annual review of the Air Force Academy Fire Department Strategic Plan, the effectiveness of interagency agreements is evaluated and alternatives to improve service delivery are examined. Interagency relationships have provided the Department and the Community with cost effective methods of maintaining adequate emergency services.

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